



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
TECHNICAL GUIDANCE DOCUMENT - 003

EFFECTIVE DATE - FEBRUARY 1, 1992
REVISED DATE - JANUARY 1, 1994

RE: Underground Injection of Treated Wastewater and Other Fluids at UST Regulated Sites

One of the options for disposal of treated wastewater at UST sites is that of reinjection. Injection wells of this type are classified as Class V wells under rule 1200-4-6.14. This class of injection well is permitted by rule. Injection of treated wastewater may occur if the following conditions are met:

1. The injection of fluids does not cause pollution.
2. Treated wastewater that does not meet primary and secondary drinking water standards as defined in rule 1200-5-1 of the Division of Water Supply is injected into the aquifer of origin and is within the capture zone of the operational ground water recovery system at the site.
3. Plans and specifications for the injection process and the injection well(s) are submitted to the Division of Underground Storage Tanks for review and approval prior to start-up.
4. All Class V injection wells are properly abandoned according to Division guidelines upon completion of injection activities.

The injection of other fluids (e.g. nutrients, oxidizers, etc.) for the purpose of enhancing bioremediation shall be subject to the conditions as specified above and subject to prior Division approval.

Monitoring requirements shall be specified in the approval letters. In most instances, monitoring for applicable hydrocarbon components will be required every six (6) months.

The Division of Underground Storage Tanks will be the lead agency in approving Class V injection wells at UST sites. The permitting of Class V injection wells for any other purpose shall be the responsibility of the Division of Water Supply.

The Application for Authorization for Class V Underground Injection Well for Underground Storage Tank Sites Regulated by the Division of Underground Storage Tanks shall be submitted to the Division of Water Supply when reinjection will be implemented at a UST site at the following address:

Division of Water Supply
6th Floor, L & C Tower
401 Church Street
Nashville, TN 37243-1549



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
WATER SUPPLY

9 th Floor, 401 Church Street
Nashville, Tennessee 37243-1549
(615) 532-0191

**APPLICATION FOR AUTHORIZATION TO OPERATE A CLASS V UNDERGROUND INJECTION
WELL OR STORM WATER DISCHARGE TO THE SUBSURFACE**

In accordance with the provisions of Tennessee Code Annotated Section 69-3-105 and Regulations of the Tennessee Water Quality Control Board, application is hereby made to operate:

- ☐ **Class V Underground Injection Well**
☐ **Discharge of Storm Water into the Subsurface**

Part A - General Information

1. Site or Facility Name _____

Street or Highway Address _____

City _____ Zip Code _____

County _____ Telephone (_____) _____

2. Describe the activities conducted by the applicant which require it to obtain a Class V permit authorization:

3. USGS topographic coordinates of the injection well or facility location (if multiple wells are at the same site, then give principal site latitude and longitude, and average elevation):

Quadrangle Name _____

Latitude _____ o _____ ' _____ " North

Longitude _____ o _____ ' _____ " West

Ground elevation at well location: _____

4. Name and address of owner of injection well or facility:

Individual or Firm Name _____

Street or RFD _____

City _____ State _____

Zip Code _____ Telephone (_____) _____

5. Type of Business: _____ Federal _____ State _____ Public
_____ Private _____ Other

6. Nature of Business:

7. List up to four standard industrial codes (SIC) which best reflect the principal products or services provided by the facility:

- a. _____
b. _____
c. _____
d. _____

8. Name and address of legal contact or person responsible for the operation of the Class V injection well or facility:

Name _____

Street or RFD _____

P.O. Box _____

City _____ State _____

Zip Code _____ Telephone (____) _____

9. Is the facility located on Indian Lands? _____ Yes _____ No

10. Permit Status: _____ a. new well or facility
_____ b. modification of existing well or facility
_____ c. reapplication for previously permitted well or facility

11. List all other permits or construction approvals received or applied for under any of the following programs:

- a. Hazardous waste management program under federal or state law
- b. UIC program under federal or state law
- c. NPDES program under federal or state law
- d. Prevention of Significant Deterioration (PSD) program under federal or state law
- e. Nonattainment area program under federal or state law
- f. National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under federal or state law
- g. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act
- h. Dredge and fill permits under Section 404 of the Clean Water Act, 33 U.S.C. 1344
- i. Comprehensive Environmental Response, Compensation and Liability Act (Federal Superfund) or Tennessee Hazardous Waste Management Act (Tennessee Superfund)
- j. UST program under federal or state law
- k. Groundwater Protection permits from Tennessee Division of Ground Water Protection
- l. Other relevant environmental permits

<u>Permit No.</u>	<u>Type</u>	<u>Date Issued</u>

Part B - Facility Description

1. Nature, type or purpose of injection well:

2. Description of injection well or facility, including monitoring wells and other associated structures (attach additional information or diagrams, if necessary):

3. Depth of injection zone: _____ feet below ground level

4. Operating status of well or facility: _____ proposed _____ active
_____ inactive _____ abandoned
5. Date injection began (if not in operation, projected date of beginning) _____
If inactive or abandoned well, approximate date injection ceased _____
6. For previously active facilities, give history of injection or operation:

7. Mode of operation: _____ continuous _____ intermittent
8. Volume of injected fluid: _____ gallons _____ or cubic yards
_____ per day _____ per month _____ per year
9. Nature of injected fluid, including physical, chemical, biological and/or radiological properties:

10. Origin of injected fluid:

11. Description of treatment of fluid prior to injection:

12. Type of injection: _____ pump _____ gravity _____ other

Description of pump(s):

13. Operating parameters of injection well:

- a. fluid flow _____ gpm
- b. fluid pressure _____ psig
- c. fluid temperature _____ Celsius
- d. other significant operating information (attach additional information or diagrams, if necessary):

Part C - Description of Area of Review

The area of review (AOR) for each authorized or permitted Class V injection well shall, unless otherwise specified by the Department, consist of the area lying within and below a one mile radius of the injection well pump site or facility, and shall include, but not be limited to surface geographic features, subsurface geology, and demographic and cultural features within the area. Attach to this part of the application a complete characterization of the AOR, including the following:

1. Description of all past and present uses of groundwater within the AOR, as documented by public record.
2. Description of the groundwater hydrology within the AOR, including characteristics of all subsurface aquifers, presence or absence of solution development features, general direction of groundwater movement, and chemical characteristics of the groundwaters in the AOR.
3. Description of the population and cultural development within the AOR, including the number of persons living within one mile of the well or facility, land uses within the AOR, and the existence of any community, state, regional or national parks, wildlife refuges, natural or wilderness areas, recreational or other public-use areas, or any other environmentally sensitive features within the area of review.
4. Identify all sources of publicly-supplied drinking water for persons living or working within the AOR.
5. Identify any single or multi-family residences, churches, schools, businesses or other inhabited structures within the AOR which do not have access to a public drinking water supply system.
6. If groundwater is used for drinking water within the area of review, then identify and locate on Attachment 1, all groundwater withdrawal points within the AOR which supply public or private drinking water systems.
7. Identify any surface water bodies or features within the area of review which may be impacted by groundwater discharge to surface waters.
8. Identify any surface water intake which supplies a public water distribution system and is located within the AOR or within three miles topographically downgradient from the well or facility. If any such intake(s) exist, then locate on Attachment 1.

Part D - Signature and Certification

This application should be signed by a person having responsibility for the operation of the injection well or facility as follows:

1. For a corporation, by a responsible corporate officer (i.e., president, secretary, treasurer, vice-president, or equivalent person) who performs policy or decision making functions; or
2. The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million if authority to sign documents has been assigned or delegated to the manager in accordance with operating procedures; or
3. For a partnership, by a general partner or the proprietor; or
4. By a duly authorized representative (a duly authorized representative may be either a named individual or any individual occupying a named position) only if:
 - a. The authorization is made in writing by a person described in (1), (2), or (3) above;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility, or
 - c. For municipality, state, federal, or other public agency by either a principal executive officer or ranking elected official.
5. The owner of the property or facility on which the injection well is located.

I certify under penalty of law I have personally examined and am familiar with the information submitted in the attached document; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Name & Title (print or type)

License No.

Signature

Date

Name & Title (print or type)

License No.

Signature

Date

Attachments

1. USGS topographic quadrangle map showing the location of the Class V injection well or facility and a one-mile radius area surrounding the well or facility.
2. USGS geologic quadrangle or regional geologic map showing the subsurface structure in the area of the well or facility, from the surface to the injection zone.
3. Schematic diagram of the injection well showing construction details and materials of the injection well.
4. Chemical analysis data of injection fluid, if required.
5. Process description of the treatment or other process which is the source of the injection fluid, if required.
6. Procedure for operation and maintenance of the injection well or facility, if required.
7. Geologic/hydrogeologic information collected during the planning, construction and design phases of the facility and injection well.
8. Blueprints from the facility showing the injection well and portions of the facility which will or may contribute injectate to the injection well, including storm runoff waters.
9. Construction diagrams depicting erosion and sediment controls.